

Remarks

The Examiner has objected to reference signs in the drawings which are not mentioned in the specification. These reference signs have now been explicitly related to existing terms in the specification with an amendment. No new matter has been added. The Examiner has also objected to a reference sign in the specification which was not illustrated in the drawings. An amendment has been made to correct this.

The Examiner has objected to the title as not being descriptive. The original title has been replaced by amendment with a new, more descriptive title.

The Examiner has objected to informalities in lines 16 and 17 of page 13. These have been corrected by amendment. The Examiner has also objected to informality in Claim 11. Claim 11 has been cancelled.

The Examiner has rejected claims 1-3, 6, 11-13 and 16 under 35 USC 102(e) as being anticipated by Komuro (US 6,327,107). The Examiner has also rejected claims 1-3, 5-6, 8, 11-13, 15-16 and 18 under 35 USC 102(e) as being anticipated by Hayashi (US 6,542,342). Claims 5, 6, 8, 11, 12, 13, 15, 16, and 18 have been cancelled. Claim 1 has been amended to include the limitation that the longitudinal bias layer is comprised of an non-conductive antiferromagnetic layer. Support for the amendment in the present application is given in Figs 2a and 2b along with the description beginning on line 22 of page 10. Komuro suggests only the use of a (conducting) ferromagnetic film to provide longitudinal bias for the free layer (line 29, col. 4). In a tunnel junction sensor, the use of such conducting films increase the risk of current shunting and

subsequent loss of sensitivity. In this embodiment of the present invention, the use of a non-conductive layer reduces the risk of current shunting. Likewise, Hayashi also teaches only the use of (conducting) ferromagnetic material to provide magnetic domain control over the free layer (line 8, col. 4). Accordingly, claim 1, as amended, is novel over both Komura and Hayashi. Claims 2 and 3 depend from claim 1 and have further limitations.

Applicant respectfully requests reconsideration of the present application.

Respectfully submitted,

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